

REMARKS

In response to the Office Action mailed November 13, 2009, Applicants respectfully request reconsideration. Claims 1-58 were previously pending for examination. Claims 1-7, 9-17, 19-25, 27-37, 39-45, 47 and 49-58 are herein amended. No claims have been canceled or added. As a result, claims 1-58 are currently pending, with claims 1, 25, 47, 49 and 50-53 being independent. No new matter has been added.

Rejections under 35 U.S.C. §112

The Office Action rejects claims 16 and 32-45 under 35 U.S.C. §112, second paragraph, as purportedly being indefinite.

The Office Action asserts that the recitation, “176 KBps”, in claim 16 is indefinite. Claim 16 has been amended herein to recite instead, “176 kilobytes per second.” Accordingly, it is respectfully requested that the rejection of claim 16 under 35 U.S.C. §112, second paragraph, be withdrawn.

The Office Action asserts that the recitations, “the device’s internal media cache”, and, “the amount of data”, in claim 32 have insufficient antecedent basis. Claim 32 has been amended herein to recite instead, “an internal media cache of the optical hardware device”, and, “data”. Accordingly, it is respectfully requested that the rejection of claim 32 and dependent claims 34 and 36 under 35 U.S.C. §112, second paragraph, be withdrawn.

The Office Action asserts that the recitation, “8 MB”, in claim 33 is indefinite. Claim 33 has been amended herein to recite instead, “8 megabytes.” Accordingly, it is respectfully requested that the rejection of claim 33 under 35 U.S.C. §112, second paragraph, be withdrawn.

The Office Action asserts that the recitation, “each amount of data is substantially equal in size”, in claim 35 is indefinite. Claim 35 has been amended herein to recite instead, “the second

amount of data is substantially equal in size to the first amount of data.” Accordingly, it is respectfully requested that the rejection of claim 35 under 35 U.S.C. §112, second paragraph, be withdrawn.

The Office Action asserts that the recitation, “the device’s internal cache”, in claim 37 has insufficient antecedent basis. Claim 37 has been amended herein to recite instead, “an internal cache of the optical hardware device”. Accordingly, it is respectfully requested that the rejection of claim 37 and dependent claims 38-45 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejections under 35 U.S.C. §101

The Office Action rejects claim 50 under 35 U.S.C. §101, because the claimed invention is purportedly directed to non-statutory subject matter. At page 3, the Office Action asserts that claim 50 is directed to a data packet which is nonfunctional descriptive material. Claim 50 as amended herein is directed to “[a] method for facilitating reading multiple concurrent data streams from optical media”. As claim 50 as amended is not directed to nonfunctional descriptive material, it is respectfully requested that the rejection of claim 50 under 35 U.S.C. §101 be withdrawn.

The Office Action rejects claims 1-24 and 52-58 under 35 U.S.C. §101, because the claimed invention is purportedly directed to non-statutory subject matter. At pages 3-4, the Office Action asserts that claims 1-24 and 52-58 are directed to “software, per se” which “does not fall within a statutory category since it is... not a mechanical device or combination of mechanical devices to constitute a machine”. Each of independent claims 1, 52 and 53 has been amended herein to recite a system “comprising at least one processor”, which constitutes a machine and as such is statutory under 35 U.S.C. §101. Accordingly, it is respectfully requested that the rejection of independent claims 1, 52 and 53 and dependent claims 2-24 and 54-58 under 35 U.S.C. §101 be withdrawn.

The Office Action rejects claim 51 under 35 U.S.C. §101, because the claimed invention is purportedly directed to non-statutory subject matter. At page 5, the Office Action asserts that claim

51 encompasses “intangible media such as signals, carrier waves, etc.” Claim 51 has been amended herein to recite, “[a]t least one computer-readable storage medium having stored thereon... computer executable components”. The specification (page 23, lines 15-22) gives as examples of computer storage media magnetic disks, floppy disks, flash memory cards, memory sticks, CD-ROMs, CD-Rs, CD-RWs and DVDs, etc., all tangible media and none intangible. Claim 51 as amended and as supported in the specification is thus directed to tangible, statutory product under 35 U.S.C. §101. Accordingly, it is respectfully requested that the rejection of claim 51 under 35 U.S.C. §101 be withdrawn.

The Office Action rejects claims 25-46 under 35 U.S.C. §101, because the claimed invention is purportedly directed to non-statutory subject matter. At page 6, the Office Action asserts that the “method steps are not tied to a particular machine”. Independent claim 25 has been amended herein to recite, “initiating a first operation comprising reading data from the optical media” and “initiating at least a second operation comprising reading data from the optical media”. Claim 25 as amended thus recites at least one step tied to a particular machine (i.e., a machine capable of reading data from optical media), and therefore is statutory under 35 U.S.C. §101. Accordingly, it is respectfully requested that the rejection of independent claim 25 and dependent claims 26-46 under 35 U.S.C. §101 be withdrawn.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1-2, 8-14, 17-18, 25-40, 43-46, 53-55, and 58 under 35 U.S.C. §102(b) as purportedly being anticipated by Ohta et al. (U.S. Patent No. 6,330,214). Applicants respectfully traverse each of these rejections.

I. Overview of Some Embodiments

The present disclosure describes systems and methods for concurrently reading two or more data streams from the same optical media, such as a CD or DVD disc (Abstract; page 1, lines 5-6;

page 2, lines 12-13). In some embodiments, one or more of the data streams may be a real-time data stream, e.g., involving playback of a track on the optical media disc, for which a particular data rate is required to play the track correctly (page 1, lines 29-32; page 2, lines 19-20). One or more others of the data streams may be a non-real-time data stream, e.g., involving “ripping” a track from the optical media disc to copy its data to a hard drive, for which maintaining a particular data rate may not be necessary (page 1, line 32 – page 2, line 1; page 2, line 18). In other embodiments, both or all of the concurrently read data streams may be real-time data streams, e.g., allowing multiple tracks from the same optical media to be concurrently and/or simultaneously played back at different outputs (e.g., in different rooms) (page 3, lines 7-12).

In some embodiments, concurrent data streaming from the same optical media may be accomplished using two or more buffers to which data may be read from the optical media disc. Each buffer may be used for a respective data stream being concurrently read from the optical media (page 2, lines 12-14; page 6, lines 17-19). Data sectors of a real-time data stream (e.g., playback stream) may be sequentially cached in one buffer for access by an audio output component (page 9, lines 17-18; page 10, lines 8-9). A non-real-time data stream (e.g., ripping stream) may be read from the optical media and stored in another buffer, such as a hard disk drive, concurrently during playback of the real-time data stream (page 9, lines 21-23; page 10, lines 9-10). Provided that the buffers are of sufficient capacity and that the optical media drive has sufficient seek speeds and data transfer rates, the optical media drive may constantly seek back and forth on the optical media, alternately filling each buffer with data sectors of its respective data stream, without interrupting playback (e.g., the required data rate) of any real-time streams being read (page 2, lines 20-22; page 8, lines 1-9; page 9, lines 10-16).

The different operations (e.g., the reading of different data streams from the same optical media) need not be initiated at the same time to be performed concurrently. For example, playback of a first data stream (e.g., reading a real-time data stream from the optical media) may be initiated at a time t_x , and recordation of a second data stream (e.g., reading a non-real-time data stream from the same optical media) may be initiated at a later time t_y , while the playback of the first data stream is currently in progress (page 9, line 27 – page 10, line 2). Thereafter, both data streams may be

maintained concurrently at their respective data rates, neither data stream interfering with the other's operation (page 10, lines 3-4; page 14, lines 1-6, 11-16).

The foregoing overview is provided solely for the convenience of the Examiner. It should be appreciated that each of the claims may not be limited in the manner described in the overview above. Therefore, the Examiner is requested not to rely upon the overview above for determining whether each of the claims distinguishes over the art of record, but to do so based solely upon the language of the claims themselves and the arguments presented below.

II. Overview of Ohta

Ohta describes a signal recorder/reproducer that can simultaneously record a signal into a recording medium and reproduce a signal from the recording medium (Ohta: col. 1, lines 6-8; col. 2, lines 10-12). The system uses a buffer in which different memory areas are allocated to the recording and the reproduction (col. 2, lines 17-25). For recording, a video signal received from a camera or antenna is first stored in the buffer, and then recorded from the buffer into a recording medium such as an optical disc (col. 4, lines 22-52; col. 12, lines 14-26). For reproducing (i.e., playback), a video signal is supplied from the optical disc to the buffer, and from the buffer to an analog video output terminal (col. 5, lines 10-30; col. 12, lines 35-46).

When a video signal contains both picture and audio information, the picture and audio are reproduced on separate channels in the reproduction system, but are stored in the optical disc as a single combined video signal (col. 15, lines 27-38; col. 16, lines 20-32). Separate picture and audio signals are multiplexed into a single multiplexed video signal for recording into an optical disc (col. 15, lines 27-38). When the video signal is reproduced, the single multiplexed signal is read from the optical disc, then demultiplexed into separate picture and audio signals and distributed to separate channels of the reproduction system (col. 16, lines 20-24).

III. Independent Claim 1 Patentably Distinguishes Over Ohta

Independent claim 1 as amended recites, *inter alia*, “at least one processor programmed to: provide concurrent recordation of data from the optical medium and playback of data from the optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$.” Nowhere does Ohta disclose or suggest these limitations.

As discussed above, Ohta describes simultaneously recording a signal *into* an optical disc and playing a single signal from the optical disc. Ohta does not describe concurrent recordation of data *from* the optical medium and playback of data from the optical medium, as required by claim 1. The “recording” described by Ohta refers to receiving a signal and writing it to the optical disc, not recording data *from* the optical disc. Furthermore, Ohta makes no mention of playback and recordation starting at different times.

For at least these reasons, claim 1 patentably distinguishes over Ohta, and it is respectfully requested that the rejection of claim 1 be withdrawn.

Claims 2, 8-14 and 17-18 depend from claim 1 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

IV. Independent Claim 25 Patentably Distinguishes Over Ohta

Independent claim 25 as amended recites, *inter alia*, “initiating a first operation comprising reading data from the optical media at time t_x ; and initiating at least a second operation comprising reading data from the optical media at time t_y while the first operation is currently in progress, wherein $t_x \neq t_y$.” Nowhere does Ohta disclose or suggest these limitations.

As discussed above, Ohta describes reproducing a single signal from an optical disc and recording a signal *into* the optical disc. At page 8, the Office Action asserts that these actions described by Ohta meet the limitations of the first and second operations recited in Applicants’ claim 25. However, even if Ohta’s reproducing action were considered a first operation, Ohta’s

recording action fails to meet the limitations of “initiating at least a second operation comprising reading data from the optical media... while the first operation is currently in progress”, as required by claim 1. As discussed above, Ohta’s recording is described as writing a signal *into* an optical disc, not *reading* data *from* the optical disc. Furthermore, Ohta makes no mention of initiating such first and second operations at different times.

For at least these reasons, claim 25 patentably distinguishes over Ohta, and it is respectfully requested that the rejection of claim 25 be withdrawn.

Claims 26-40 and 43-46 depend from claim 25 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

V. Independent Claim 53 Patentably Distinguishes Over Ohta

Independent claim 53 recites, *inter alia*, “at least one processor programmed to: provide concurrent recordation of and playback of respective media from an optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$ ”. For reasons that should be clear from the foregoing discussion of Ohta, Ohta fails to disclose or suggest at least these limitations of claim 53. Therefore, claim 53 patentably distinguishes over Ohta, and it is respectfully requested that the rejection of claim 53 be withdrawn.

Claims 54-55 and 58 depend from claim 53 and are allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

Rejections Under 35 U.S.C. §103

I. Rejections Over Ohta

The Office Action rejects claims 19-24 and 49 under 35 U.S.C. §103(a) as purportedly being obvious over Ohta. Applicants respectfully traverse each of these rejections.

A. *Dependent Claims 19-24 Patentably Distinguish Over Ohta*

Claims 19-24 depend from independent claim 1 which, for reasons discussed above, patentably distinguishes over any combination of teachings of Ohta. For at least the same reasons, claims 19-24 also patentably distinguish over any combination of teachings of Ohta, and it is respectfully requested that the rejections of claims 19-24 be withdrawn.

B. *Independent Claim 49 Patentably Distinguishes Over Ohta*

Independent claim 49 recites, *inter alia*, “starting to read at least a first non-real-time data stream from the optical media at time t_x ; and starting to read at least a second non-real-time data stream from the optical media concurrently with the first non-real-time data stream at time t_y , wherein t_x is not equal to t_y .” No combination of teachings of Ohta discloses or suggests these limitations.

At page 15, the Office Action asserts that Ohta’s description of reproducing a video signal on separate picture and audio channels (Ohta: col. 16, lines 20-33) meets the limitations of the first and second non-real-time data streams recited in Applicants’ claim 49. However, as discussed above, Ohta’s picture and audio channels are not described as separate signals when read from the optical disc. Rather, Ohta describes reading a single video signal from the optical disc, and then demultiplexing that single signal into separated picture and audio channels. Ohta thus does not describe reading a first data stream from the optical media and concurrently reading a second data stream from the optical media, as required by claim 49. Furthermore, Ohta nowhere describes the video signal or the picture and audio channels as non-real-time data streams.

In addition, the Office Action (page 15) concedes that Ohta does not disclose starting to read first and second data streams at different times, but asserts that this deficiency is cured by “Official Notice.. taken that users in Ohta can select different starting times for playing back each of the plurality of data streams according to their convenience.” Applicants respectfully submit that this “Official Notice” is incorrect. Even if Ohta’s picture and audio channels could be considered a “plurality of data streams”, as asserted by the Office Action, Ohta gives no indication that users

could select different starting times for playing back each of the picture and audio channels. On the contrary, as the picture and audio channels are described as parts of the same video signal, there is no indication of any possibility of selecting different starting times for playing back each channel.

For at least these reasons, claim 49 patentably distinguishes over any combination of teachings of Ohta, and it is respectfully requested that the rejection of claim 49 be withdrawn.

II. Rejections Over Ohta and Kitamura

The Office Action rejects claims 3-4, 47-48 and 50-52 under 35 U.S.C. §103(a) as purportedly being obvious over Ohta in view of Kitamura (U.S. Patent No. 7,286,601). Applicants respectfully traverse each of these rejections.

A. *Overview of Kitamura*

Kitamura describes a digital receiving apparatus for a broadcast system (Kitamura: Abstract). The broadcast system caters to audiences who are accustomed to analog broadcasting rather than digital broadcasting, by transmitting two different digital streams to the receiving apparatus (Kitamura: Abstract; col. 2, lines 1-3). The first digital stream is encoded at a lower bit rate than the second digital stream, and the second digital stream is delayed relative to the first digital stream (Kitamura: col. 2, lines 4-9). The receiving apparatus normally reproduces the second digital stream for the audience (Kitamura: col. 2, lines 9-11). However, if a transmission path failure occurs, the receiving apparatus fills the gap with the corresponding portion of the first digital stream, which was received earlier (Kitamura: col. 2, lines 11-15). The audience, hearing a lower quality signal at that time, recognizes that a transmission path failure occurred, because the effect imitates an analog transmission path failure (Kitamura: col. 1, lines 60-65).

B. *Dependent Claims 3-4 Patentably Distinguish Over Ohta and Kitamura*

Dependent claims 3-4 depend from independent claim 1. As discussed above, Ohta fails to meet several limitations of claim 1, including “concurrent recordation of data from the optical

medium and playback of data from the optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$.” Kitamura does not cure the deficiencies of Ohta in this respect.

As discussed above, Kitamura describes a receiving apparatus that receives two digital streams in a broadcast system. Kitamura is unrelated to optical media, and accordingly makes no mention of “concurrent recordation of data from the optical medium and playback of data from the optical medium”, as required by claim 1, let alone of any starting times for such playback and recordation.

Accordingly, even if Ohta and Kitamura were combined, the alleged combination would fail to meet at least the above-mentioned limitations of claim 1. The alleged combination would thus also fail to meet all limitations of each of dependent claims 3-4. Therefore, claims 3-4 patentably distinguish over any combination of Ohta and Kitamura, and it is respectfully requested that the rejections of these claims be withdrawn.

C. *Independent Claim 47 Patentably Distinguishes Over Ohta and Kitamura*

Independent claim 47 recites, *inter alia*, “starting to read at least a first real-time data stream from the optical media at time t_x ; and starting to read at least a second real-time data stream from the optical media concurrently with the first real-time data stream at time t_y , wherein $t_x \neq t_y$.” Neither Ohta nor Kitamura discloses or suggests these limitations.

For reasons that should be clear from the foregoing discussion of Ohta, Ohta fails to disclose or suggest limitations of claim 47 related to concurrently reading a first and a second data stream from optical media, let alone first and second real-time data streams. As should also be clear from the foregoing discussion, “Official Notice... taken that users in Ohta can select different starting times for playing back each of the plurality of data streams according to their convenience” (Office Action at page 16) is incorrect and fails to cure the deficiencies of Ohta.

Kitamura also fails to cure the deficiencies of Ohta, as Kitamura is unrelated to optical media, as discussed above. Accordingly, Kitamura also makes no mention of “starting to read at least a first real-time data stream from the optical media at time t_x ; and starting to read at least a second real-time data stream from the optical media concurrently with the first real-time data stream at time t_y , wherein $t_x \neq t_y$ ”, as required by claim 47.

For at least these reasons, claim 47 patentably distinguishes over any combination of Ohta and Kitamura, and it is respectfully requested that the rejection of claim 47 be withdrawn.

Claim 48 depends from claim 47 and is allowable for at least the same reasons. Accordingly, it is respectfully requested that the rejection of claim 47 be withdrawn.

D. *Independent Claim 50 Patentably Distinguishes Over Ohta and Kitamura*

Independent claim 50 as amended recites, *inter alia*, “transmitting a data packet between two or more computer processes, the data packet comprising information associated with reading a real-time data stream from the optical media at time t_x and concurrently reading a non-real-time data stream from the optical media at time t_y , wherein $t_x \neq t_y$.” Neither Ohta nor Kitamura discloses or suggests these limitations.

For reasons that should be clear from the foregoing discussion of Ohta and Kitamura, these references, whether alone or in combination, fail to disclose or suggest limitations of claim 50 related to concurrently reading a real-time data stream and a non-real-time data stream from optical media. Any combination of these references therefore necessarily also fails to disclose or suggest “transmitting a data packet between two or more computer processes, the data packet comprising information associated with” such concurrent reading, as required by claim 50.

For at least these reasons, claim 50 patentably distinguishes over any combination of Ohta and Kitamura, and it is respectfully requested that the rejection of claim 50 be withdrawn.

E. *Independent Claim 51 Patentably Distinguishes Over Ohta and Kitamura*

Independent claim 51 recites, *inter alia*, “a component that provides for concurrently reading a non-real-time data stream from optical media starting at time t_y and reading a real-time data stream from the optical media starting at time t_x , wherein $t_x \neq t_y$.” For reasons that should be clear from the foregoing discussion of Ohta and Kitamura, these references, whether alone or in combination, fail to disclose or suggest at least these limitations of claim 51. Therefore, claim 51 patentably distinguishes over any combination of Ohta and Kitamura, and it is respectfully requested that the rejection of claim 51 be withdrawn.

F. *Independent Claim 52 Patentably Distinguishes Over Ohta and Kitamura*

Independent claim 52 as amended recites, *inter alia*, “at least one processor programmed to: start to read at least one real-time data stream from the optical media at time t_x ; and start to read one or more non-real-time data streams from the optical media at time t_y , concurrently while reading the at least one real-time data stream, wherein $t_x \neq t_y$.” For reasons that should be clear from the foregoing discussion of Ohta and Kitamura, these references, whether alone or in combination, fail to disclose or suggest at least these limitations of claim 52. Therefore, claim 52 patentably distinguishes over any combination of Ohta and Kitamura, and it is respectfully requested that the rejection of claim 52 be withdrawn.

III. Rejections Over Ohta and Osakabe

The Office Action rejects claims 5-7, 15-16 and 56-57 under 35 U.S.C. §103(a) as purportedly being obvious over Ohta in view of Osakabe (U.S. Patent No. 6,894,961). Applicants respectfully traverse each of these rejections.

Each of claims 5-7, 15-16 and 56-57 depends from an independent claim which, as discussed above, patentably distinguishes over Ohta. Osakabe is cited as teaching determining data transfer capabilities of an optical medium, an optical medium comprising a CD or a DVD, and an optical medium having a guaranteed minimum data transfer rate. Osakabe is not cited as curing the

deficiencies of Ohta discussed above. Accordingly, even if Ohta and Osakabe were combined, the alleged combination would fail to meet all limitations of each of claims 5-7, 15-16 and 56-57. Therefore, claims 5-7, 15-16 and 56-57 patentably distinguish over any combination of Ohta and Osakabe, and it is respectfully requested that the rejections of these claims be withdrawn.

IV. Rejections Over Ohta and King

The Office Action rejects claims 41-42 under 35 U.S.C. §103(a) as purportedly being obvious over Ohta in view of King et al. (U.S. Publication No. 2002/0169996). Applicants respectfully traverse each of these rejections.

Claims 41-42 depend from independent claim 25 which, as discussed above, patentably distinguishes over Ohta. King is cited as teaching sending a READ10 command with a FUA bit set to one, and is not cited as curing the deficiencies of Ohta discussed above. Accordingly, even if Ohta and King were combined, the alleged combination would fail to meet all limitations of each of claims 41-42. Therefore, claims 41-42 patentably distinguish over any combination of Ohta and King, and it is respectfully requested that the rejections of these claims be withdrawn.

General Comments on Dependent Claims

Because each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the further distinguishing features of all of the dependent claims. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address in the future the further patentability of the dependent claims not specifically addressed herein.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance to discuss any outstanding issues relating to the allowability of this application.

If the response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. Applicants believe no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 23/2825 under Docket No. M1103.70660US00 from which the undersigned is authorized to draw.

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Respectfully submitted,

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